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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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29989 7590 05/16/2007 HICKMAN PALERMO TRUONG & BECKER, LLP 2055 GATEWAY PLACE SUITE 550 SAN JOSE, CA 95110			EXAMINER NGUYEN, LE V	
			ART UNIT 2174	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/727,799	<b>Applicant(s)</b> GETTMAN ET AL.	
	<b>Examiner</b> Le Nguyen	<b>Art Unit</b> 2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-83 is/are pending in the application.
- 4a) Of the above claim(s) 58-62 and 73-81 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57, 63-72, 82 and 83 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This communication is responsive to an amendment filed 2/9/07.
2. Claims 1-83 are pending in this application; and, claims 1, 55, 68 and 72 are independent claims. Claims 58-62 and 73-81 are drawn to the non-elected claims and are withdrawn from consideration.

### ***Oath/Declaration***

3. The oath or declaration is defective because:  
  
applicant has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or declaration; and,  
  
a statement over applicant's signature providing a complete post office address is required.

### ***Drawings***

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 2, 3 and 4 of fig. 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

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amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 6 and 48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites "a polygon with straight and/or curved side, a polyhedron with straight and/or curved edges" in lines 2-3. By definition, a polygon and a polyhedron, which is a type of polygon, have straight sides and edges.

Claim 48 recites "whereby priority is given to display windows with material content that is less computer-resource intensive, so that these display windows are more likely to be selected as part of the subset of display windows to be rendered to

memory, are more likely to remain part of the subset, and are allocated more computer resources while part of the subset". Since it does not make sense to give priority to windows requiring less computer resources, the examiner will interpret "whereby priority is given to display windows with material content that is less computer-resource intensive, so that these display windows are more likely to be selected as part of the subset of display windows to be rendered to memory, are more likely to remain part of the subset, and are allocated more computer resources while part of the subset" to mean: giving priority to windows that require more of resources to render.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 55 and 68 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 72 of copending Application No. 10/864660 and claim 180 of copending Application No. 10/864906. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim(s) 72 of Application No. 10/864660 and claim(s) 180 of Application No. 10/864906 contain(s) every element of claim(s) 1, 55 and 68 of the instant application and thus anticipate the claim(s) of the instant application. Claim(s) of the instant application therefore is/are not patently distinct from the earlier patent claim(s) and as such is/are unpatentable over obvious-type double patenting. A later patent/application claim is not patentably distinct from an earlier claim if the later claim is anticipated by the earlier claim.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting

because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus)"

In regards to claim 72 of copending Application No. 10/864660, it is obvious to use the method of organizing and presenting material content, as described in claims 1, 55 and 68 of the instant application, on a computer. Claim 180 anticipates the steps of claims 1, 55 and 68 of the instant application; moreover, it is obvious to put these steps on a computer readable medium such as a disk.

### ***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-16, 18, 26-34, 37-40, 51-53, 55-57, 63-70, 72 and 83 rejected under 35 U.S.C. 102(e) as being anticipated by Rovira.

As per claim 1, Rovira teaches a method for organizing and presenting material content on a display to a viewer, the method comprising: mapping a plurality of display windows within a virtual three-dimensional space so that each display window is allocated a specific and predetermined position in the space (fig. 4), rendering each

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display window in three-dimensional perspective according to its position and angle relative to a viewer's virtual position in the virtual space (Abstract), cross-referencing the position of each display window to a storage location of the material content that is designated to be rendered in that particular display window at a particular time based on at least one predetermined condition (fig. 1C), allocating at least part of the three-dimensional virtual space to display windows whose content is not chosen or determined by the viewer, selecting, retrieving and preparing material content for possible subsequent display, according to a predetermined algorithm (col. 10, lines 60-63), selecting and rendering prepared material content within its cross-referenced display window, according to a predetermined algorithm, providing a means of virtual navigation that changes the viewer's position in the space in such a manner as to simulate movement through a plurality of predefined channels in the virtual space (col. 7, lines 39-41).

As per claim 2, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the display windows are positioned in the three-dimensional virtual space in such a manner as visually to represent exterior surfaces of three-dimensional objects (fig. 5).

As per claim 3, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein a three-dimensional virtual universe comprises at least two three-dimensional virtual spaces (col. 8, line 36).



As per claim 4, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein at least two of the virtual spaces are connected (col. 8, lines 36-37).

As per claim 5, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the material content comprises any one of HTML pages, XML pages, multimedia presentations, VRML, data, numbers, text, still images such as photographs or graphics, moving images, holograms, virtual control panels and sound files (figs. 2-4).

As per claim 6, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein each display window comprises one of a parallelogram, an ellipse, a scroll, a curved concave and/or convex surface, a polygon with straight and/or curved sides, a polyhedron with straight and/or curved edges, an elliptical solid, and an empty or amorphous space (fig. 4, e.g. window 440).

As per claims 7 and 8, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein each unique position of a display window is identified by numerical coordinates wherein the numerical coordinates refer to axes within the space (Abstract; fig. 4; inherent in order to define location in a three-dimensional space).

As per claim 9, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein at least some of the material content is retrieved from a network (col. 12, lines 60-62).

As per claim 10, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the retrieving step comprises retrieving at least some of the content from a local or remote storage medium (fig. 1C; col. 12, lines 60-62).

As per claims 11, 56 and 65, Rovira teaches a method and apparatus for organizing and presenting material content on a display to a viewer comprising interaction means to enable the viewer to interact with the material content displayed in at least one of the display windows (col. 11, lines 36-45).

As per claim 12, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the interaction with material content occurs while the material content remains in situ in its cross-referenced display window within the three-dimensional virtual space (fig. 5; interaction takes place in the window).

As per claim 13, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the interaction with material content occurs by displaying the material content other than in situ in its cross-referenced display window (fig. 5; portal into another environment via interaction with door 510).

As per claim 14, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the predetermined condition for cross referencing comprises receiving financial consideration from a real commercial concern (col. 11, lines 36-45).

As per claim 15, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein a part of the three-dimensional virtual space

comprises cross-referenced content material that is mainly determined by the viewer (col. 11, lines 6-8).

As per claim 16, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the channels may be straight, curved, round or irregular (figs. 2-4; col. 7, lines 46-48).

As per claim 18, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the three-dimensional virtual space is a representation of a geographical landscape (col. 7, lines 46-48).

As per claims 26 and 27, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the three-dimensional virtual space contains at least one navigational reference object at a predetermined position and wherein the navigational reference object comprises any one of a gateway, landmark, ambient condition and advertisement (col. 11, lines 55-60; col. 9, lines 59-65).

As per claim 28, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the height of virtual three-dimensional structures in the three-dimensional space is varied to aid navigation (fig. 4 vs. fig. 5).

As per claim 29, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the advertisement is rendered in a way similar to the material content of a display window and is specified by an actual commercial enterprise or other organization or entity in exchange for actual financial payments (col. 9, lines 24-28; col. 10, lines 24-25; col. 11, lines 35-40).

As per claim 30, Rovira teaches a method for organizing and presenting material content on a display to a viewer whereby sets of material content, associated by one or more characteristics, are cross-referenced to display windows that are spatially grouped together in the three-dimensional virtual space (col. 8, line 16).

As per claim 31, Rovira teaches a method for organizing and presenting material content on a display to a viewer whereby the designation of material content for rendering in a display window at a particular position at a particular time is conditional upon one or more of the following: the number, behavior and/or nature of viewers who navigate to or near that position in the three-dimensional virtual space; the nature of material content in other display windows near that position; the availability of the display window at the selected position; restrictions on the type of material content being cross referenced; other requirements (col. 9, lines 44-59; content dependent upon behavior of viewers who navigate to or near a particular position).

As per claim 32, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the viewer is prevented from navigating into a restricted area of the three-dimensional space unless the viewer fits a certain profile or fulfills certain predetermined conditions (col. 10, lines 19-20).

As per claim 33, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the virtual space is initially rendered such that the viewer is positioned at one of a number of predetermined points of entry into the virtual space (col. 10, line 60).

As per claim 34, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the point of entry is the viewer's destination after leaving another three-dimensional virtual space (col. 9, lines 48-50).

As per claim 37, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the viewer can simulate movement through the three-dimension virtual space only by the first or second system for rapid viewer movement via the channels and cannot transfer from one position to another position other than by these mechanisms (col. 9, lines 44-46; carpooling is limited to the car ride).

As per claim 38, Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising displaying to the viewer the three-dimensional virtual space from an elevated perspective looking downwards at an angle from a simulated height or a bird's-eye perspective looking directly downwards from a simulated height (fig. 4).

As per claim 39, Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising displaying the layout of the three-dimensional virtual space on a two-dimensional or three-dimensional topological map (fig. 2, element 220).

As per claim 40, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the map highlights any one or more of the following: the predetermined points of entry into the three-dimensional virtual space, the

fixed start and stop locations of the rapid viewer movement mechanisms (col. 8, lines 44-45).

As per claim 51, Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising recording for subsequent access by the viewer, the display window position or network address or storage location of material content chosen by the viewer (col. 9, lines 45-50; via clicking a hyperlink).

As per claim 52, Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising recording or storing data about the position, simulated movements and interactions executed by the viewer (fig. 2; updated map based on viewer position, movements and interactions).

As per claim 53, Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising the storage of data representative of the movements and interactions executed by viewers, the collation of this data from multiple viewers, and the representation of the data in a graphical format (col. 9, lines 35-52).

Claims 55, 68 and 72 are individually similar in scope to claim 1 and are therefore rejected under similar rationale.

As per claim 57, Rovira teaches an apparatus for organizing and presenting material content on a display to a viewer wherein the navigation means is adapted to change the viewer's position at different rates, simulating movement at different speeds through the three-dimensional virtual space (col. 8, lines 44-51).

As per claim 63, Rovira teaches an apparatus for organizing and presenting material content on a display to a viewer comprising means for allocating fixed

numerical coordinates to each unique position of a display window in order to specify its location in the virtual space (Abstract; fig. 4; inherent in order to define location in a three-dimensional space).

As per claim 64, Rovira teaches an apparatus for organizing and presenting material content on a display to a viewer comprising any one of a computer screen, a television screen, a screen attached to or part of a games console, a personal digital assistant screen, a cell phone display, a projection, a pair of projection spectacles, a cerebral implant display, a pair of virtual reality spectacles, and other digital display mechanisms (fig. 1C, element 150C).

As per claims 66 and 67, Rovira teaches an apparatus for organizing and presenting material content on a display to a viewer wherein the interaction and navigation means comprises at least one of a computer keyboard, a mouse, a joystick, a game pad, a games console controller, virtual reality gloves, a trackpad, a trackball, a cerebral implant, an eye movement detection device, a motion detection device, and a touchscreen (col. 6, lines 25-27).

As per claim 69, Rovira teaches a browser for organizing and presenting material content on a display to a viewer, comprising one or more stored sequences of instructions which, when executed by one or more processors, cause the one or more processors to perform the steps in which the viewer is not able to edit the cross-references (col. 10, line 60).

As per claim 70, Rovira teaches a browser for organizing and presenting material content on a display to a viewer, comprising one or more stored sequences of

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instructions which, when executed by one or more processors, cause the one or more processors to perform the steps in which the viewer is not able to alter the position of display windows in the virtual space (figs. 2-4).

As per claim 83, Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein at least some of the material content itself comprises one or more three-dimensional virtual objects or spaces (col. 11, lines 11 and 15).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rovira in view of Strasnick et al. ("Strasnick").

As per claim 17, although Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising channels (fig. 2), Rovira does not explicitly disclose some of the channels being arranged in a grid-like pattern. Strasnick teaches some of the channels being arranged in a grid-like pattern (figs. 1-2B; e.g. the channel in Europe depicted in fig. 1A). It would have been obvious to an artisan at the time of the invention to incorporate the method of Strasnick with the method of Rovira



given that a virtual world corresponds to the real world and the real world such as European cities include these grid-like channels or roads.

14. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rovira in view of Yuen.

As per claim 19, although Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising channels comprising a geographical landscape (fig. 2), Rovira does not explicitly teach the geographical landscape being an urban landscape. Yuen teaches a geographical landscape being an urban landscape (fig. 1). It would have been obvious to an artisan at the time of the invention to incorporate the method of Yuen with the method of Rovira in order to provide users with more attractions.

As per claim 20, the modified Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the urban landscape is a visual representation of a town or city, the channels are visual representations of roads, and at least one of the display windows is a visual representation of a retail shop window arranged on either side of a road (Yuen: fig. 1).

15. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rovira in view of Yuen as applied to claim 19, and further in view of Strasnick et al. ("Strasnick").

As per claim 21, although Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising a town or city, Rovira does not explicitly disclose the town or city being a town or city that exists or did exist in the physical world. Strasnick teaches a material content on a display to a viewer wherein

the town or city being a town or city that exists or did exist in the physical world (col. 6, lines 27-33). It would have been obvious to an artisan at the time of the invention to incorporate the method of Strasnick with the method of Rovira in order to provide users an environment with real world applications.

16. Claims 22-25, 35-36, 41-50, 54, 71 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rovira.

As per claims 22-25 and 82, although Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the three-dimensional virtual space is a visual representation of various destinations and attractions such as a drive-in movie, car dealership, shopping area and the channels are visual representations of aisles or walkways and the display windows are visual representations of shop floor displays in the store (figs. 2-5; col. 11, lines 38-46) and enables Internet browsing, virtual stores, virtual retail lists/catalogues, virtual corridor/gallery, entertainment choices, TV guides (figs. 2 and 5; col. 11, lines 10-15 and 37-46; col. 12, lines 59-60), Rovira does not explicitly disclose these attractions and destinations to be the inside of a department store, supermarket with shelves, shopping mall with shop-fronts or a library with shelves as well as enabling knowledge management, virtual exhibitions, medical records management, virtual hospital patient management, virtual museums, tourist guides, news digests, travel/hospitality option guides, virtual trade fairs and photo libraries. Official Notice is taken that such attractions, documents and management tools are well known. It would have been obvious to an artisan at the time of the invention to incorporate such attractions,

documents and management tools with the method of Rovira given that a virtual world corresponds to the real world and the real world include these examples.

As per claims 35 and 36, although Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising providing a first system for rapid viewer movement through the three-dimensional virtual space wherein there are predetermined start and stop positions, so as to simulate travel in various ways such as driving or flying via virtual vehicles providing a second system for rapid viewer movement through the three-dimensional virtual space wherein the viewer can determine the locations for starting and stopping (Rovira: col. 7, lines 39-41 and 61-63), Rovira does not explicitly disclose virtual vehicles being of a railway type such as an underground railway, an over-ground railway, an elevated railway or cable-car, a taxi or helicopter. Official Notice is taken that such railways especially in the video gaming arts are well known to artisans at the time of the invention. It would have been obvious to an artisan at the time of the invention to incorporate such destinations with the method of Rovira given that a virtual world corresponds to the real world and the real world include these examples.

As per claim 41, although Rovira teaches a method for organizing and presenting material content on a display to a viewer (fig. 2), Rovira does not explicitly disclose a predetermined algorithm for rendering (or for the preparation for rendering) of material content for the display windows in the three-dimensional virtual space comprising the dynamic selection of a subset of the display windows, rendering their cross-referenced material content to memory, and then copying the rendered material content into their

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designated display windows. Official Notice is taken that rendering to regular memory and blasting to video memory is standard and well known. It would have been obvious to an artisan at the time of the invention to incorporate such rendering to regular memory and blasting to video memory with the method of Rovira in order to provide faster rendering of graphics, especially given that doing it directly from video memory is slow.

As per claim 42, the modified Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising identifying a current position and navigation direction of the viewer and using said position and said direction as an input to the algorithm for selecting the subset of display windows to be rendered to memory (Rovira: col. 11, lines 3-8).

As per claim 43, the modified Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising recording one or more movements and speed of the viewer and using said movements and speed as an input to the algorithm for selecting the subset of display windows to be rendered to memory (Rovira: col. 8, lines 44-45).

As per claim 44, the modified Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising recording all or part of a history of viewer activities and using this data as an input to the algorithm for the purposes of selecting the subset of display windows to be rendered to memory (Rovira: col. 10, lines 15-17).

As per claim 45, the modified Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising the recording of the last modification date and time of rendered material content and using this data as an input to the algorithm for the purposes of selecting the subset of display windows to be rendered to memory (Rovira: col. 11, lines 5-10).

As per claims 46 and 47, Rovira teaches a method for organizing and presenting material content on a display to a viewer (fig. 2), Rovira does not explicitly disclose updating of display windows with animated or interactive material content which are out of view or far from the viewer, but which the algorithm determines are soon likely to be in view and near to the viewer, are put temporarily into a suspended state so that the animation or interactivity can be rapidly resumed when needed and limiting or suspending computer resources allocated to the rendering of a subset of display windows to memory whenever the viewer's position is changing. Official Notice is taken that such common methods of stopping animation and moving visual data to memory is well known, for example, the use of page files to move data from memory to disk when it is not needed is a commonly used method (a.k.a. virtual memory). It would have been obvious to an artisan at the time of the invention to incorporate such common methods of stopping animation and move visual data to memory with the method of Rovira in order to reduce processing load of CPU and memory system.

As per claim 48, although the modified Rovira teaches a method for organizing and presenting material content on a display to a viewer (fig. 2), Rovira does not explicitly disclose priority given for displaying windows with material content that is more

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computer-resource intensive. Official Notice is taken that giving priority to windows that require more of resources to render is well known. It would have been obvious to an artisan at the time of the invention to incorporate giving priority to windows that require a lot of resources with the method of the modified Rovira in order to render windows that require a lot of resources faster.

As per claims 49 and 50, although Rovira teaches a method for organizing and presenting material content on a display to a viewer comprising restricting access to portals (col. 12, lines 42-51), Rovira does not explicitly disclose a two-part security key to protect the integrity of the cross references for a particular virtual space, wherein the public key is provided to the viewer in order to decrypt the cross-references that have been encrypted with the private key wherein the cross references are signed with the private key and the public key is provided to the viewer in order to verify the authenticity of the cross-reference signature. Official Notice is taken that such use of public keys and private keys are well known. It would have been obvious to an artisan at the time of the invention to incorporate such use of public and private keys with the method of Rovira in order to protect information assets.

As per claim 54, although Rovira teaches a method for organizing and presenting material content on a display to a viewer wherein the graphical format is a map (figs. 2, element 220), Rovira does not explicitly disclose the map being a contour Map. Official Notice is taken that the use of contour maps are well known in the art. It would have been obvious to an artisan at the time of the invention to incorporate such use of

contour maps with the method of Rovira in order to provide users with an implementation preference.

As per claim 71, although the modified Rovira teaches a browser for organizing and presenting material content on a display to a viewer comprising one or more stored sequences of instructions which, when executed by one or more processors, cause the one or more processors to perform the steps (figs. 1A-2), Rovira does not explicitly disclose a first part adapted to run at high priority to control the display of a virtual three-dimensional space, and a second part, adapted to run at a lower priority, which controls the updating of material content in display windows. Official Notice is taken that such usage of higher and lower priority threads (i.e. using higher priority threads to display more important information) is common. It would have been obvious to an artisan at the time of the invention to incorporate such usage of higher and lower priority threads with the method of Rovira in order to ensure that the most important information is displayed first.

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

LaHood (US 5,874,956) teaches an apparatus and method for three-dimensional manipulation of point of view and object.

Robertson et al. (US 7,119,819 B1) teach a method and apparatus for supporting two-dimensional windows in a three-dimensional environment.

Horvitz et al. (US 5,880,733) teach a display system and method for displaying windows of an OS to provide a 3D workspace for a computer system.

Sugiyama et al. (US 6,002,403) teach a graphical navigation control for selecting applications on visual walls.

Shuping et al. (US 6,313,855 B1) teach a system and method for Web browsing.

Clanton, III et al. (US 5,524,195) teach a GUI for interactive TV with an animated agent.

Hatlelid et al. (US 6,772,195 B1) teach chat clusters for a virtual world application.

Nikolovska et al. (US 6,281,898 B1) teach spatial browsing approach to multimedia information retrieval.

Fung et al. (US 7,134,092 B2) teach a GUI method and apparatus.

Berstis (US 6,243,091 B1) teaches global history view.

Filo et al. (US 6,215,498 B1) teach a virtual command post.

Schileru-Key (US 6,388,688 B1) teach a graph-based visual navigation through spatial environments.

Miller (US 6,229,542) teach a method and apparatus for managing windows in 3D in a 2D windowing system.

Akazawa et al. (US 7,155,680 B2) teach an apparatus and method for providing virtual world customized for user.



Matsuda (US 6,346,956 B2) teach a 3D virtual reality space display processing apparatus, a 3D virtual reality space display processing method and information providing medium.

***Inquires***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lê Nguyen whose telephone number is **(571) 272-4068**. The examiner can normally be reached on Monday - Friday from 7:00 am to 3:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached at (571) 272-4063.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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